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EXAMINER

LEE, BENNY T

ART UNIT

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/761,972

Filing Date: January 20, 2004

Appellant(s): DOVE ET AL.

James Sheridan
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2 May 2006 appealing from the Office action
mailed 1 November 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

| | | |
|-----------|--------------------|----------------|
| 5,426,399 | Matsubayashi et al | 20 June 1995 |
| 5,317,292 | Leeb | 31 May 1994 |
| 6,457,979 | Dove et al | 1 October 2002 |

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by either Leeb or Matsubayashi et al (both of record).

Note that each reference discloses first and second dielectric mounds (1, 5 in Leeb; 10a, 10c in Matsubayashi et al) encapsulating first and second signal conductors (2 in Leeb; 3 in Matsubayashi et al). A third dielectric mound (1, 5 in Fig. 10 of Leeb; 10b in Matsubayashi et al) which encapsulates a signal conductor (3 in Matsubayashi et al, 2 in fig. 10, of Leeb) and which is disposed in a “valley” adjacent to (i.e. between) the first and second dielectric mounds. A first ground plane (2 in Matsubayashi et al; 6 in Leeb) and a second ground plane (8 in Leeb; 4, 6 in Matsubayashi et al) is disposed about each of the first, second and third dielectrics.

Claims 8, 12; 13, 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Leeb (of record).

Note that in Leeb, each of the first, second and third dielectric mounds comprise upper and lower dielectric mounds (1, 5) which, being deposited one on top of the other in a laminated manner over a first ground plane, and inherently characterizes a thick film construction. Moreover, it should be noted that a set of second ground planes are correspondingly deposited over the first, second and third dielectric mounds to provide a shielded set of mounds with a

conductive cap and which encapsulated transmission lines therein, as described in the preceding rejection.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leeb or Matsubayashi et al in view of Dove et al ('979), all of record.

Each primary reference discloses the claimed invention except for the respective dielectric mounds being comprised of KQ dielectric material.

Dove et al discloses that the use of KQ dielectrics especially in shielded coaxial multi-layer structures is conventional in the art.

Accordingly, in view of the recognized teaching in Dove et al, it would have been obvious to have modified the dielectric mounds of either primary reference to have been KQ dielectric material, especially in view of their conventional use in shielded coaxial multi-layer structures such as in either primary reference.

(10) Response to Argument

With regard to the first issue subject to review on appeal [i.e. **whether claims 1-3 are anticipated by either Leeb or Matsabayashi et al under 35 USC 102(b)**], appellants' have advance the argument that neither of the prior art to Leeb or Matsabayashi et al teach a "third dielectric" mound "filling a valley between the first and second mounds of dielectric" and that the third dielectric is "encapsulating a third conductor". In particular, it has been further asserted by appellants' that a dielectric mound "disposed in a valley" adjacent (i.e. between) to the first and second dielectric mounds (as disclosed by Leeb or Matsabayashi et al) is not equivalent to "filling a valley" between the first and second dielectric mounds. Furthermore, appellants' question whether Leeb or Matsabayashi et al disclose any "valley" between the first and second dielectric mounds since Leeb and Matsabayashi et al appear to form their dielectric mounds "in parallel", as to render questionable whether Leeb or Matsabayashi et al really disclose forming a third dielectric mound in "a valley between" first and second dielectric mounds, as such a valley is never really created".

In considering appellants' arguments regarding claims 1-3, the critical issue appears to be one of what appropriately characterizes a "valley" and whether such a characterization of the "valley" in Leeb or Matsabayashi et al is sufficient to anticipate such a claim limitation. As pointed out in the above rejection of record, contrary to applicants' assertion, it should be noted that the space between the raised sloping walls of the first and second shielded transmission lines in either Leeb or Matsabayashi et al, as interpreted by the examiner in the above rejection, would indeed constitute a "valley". Consider that if the space between the sloping walls of the shielded transmission lines were left empty, such space would indeed have been considered a "valley"

(i.e. a hollow space surrounded by raised opposing walls). Accordingly, any structure (e.g. another “shielded transmission line”, etc) is placed or located in such a space would necessarily have been considered by one of ordinary skill in the art to have been “filling” the “valley” and thus would have met this claim recitation. Additionally, it should be noted that the limitation “filling the valley” provides no limit on how much the “valley” needs to be filled. Accordingly, the amount of fill in the “valley” as taught by either Leeb or Matsubayashi et al is thus sufficient to meet the broadest reasonable interpretation of the limitation “filling the valley”. Furthermore, while it is acknowledged that the “mounds” in Leeb or Matsubayashi et al are arranged “in parallel”, it should also be noted that appellants’ “mounds” (i.e. first, second, third) are likewise considered to be arranged “in parallel” in much the same manner as in Leeb or Matsubayashi et al. That is to say, since both the dielectric mounds of both the prior art references and the present invention are arranged in an analogous side-by-side configuration, then if it would be appropriate to characterize both the present invention and the prior art arrangement as being “in parallel”, then it would then be likewise appropriate to characterize the third dielectric mound in the parallel arrangement in each of the prior art references as “filling the valley” much to the same degree as appellants’ consider their own parallel arrangement as “filling the valley”.

With regard to the second issue subject to review on appeal [i.e. **whether claims 8, 12 13 and 17 are anticipated by Leeb under 35 USC 102(b)**], appellants’ have advance the argument that Leeb does not appear to disclose the particular construction method of claims 8, 13. In particular, appellants’ assert that the claimed method steps “imply an order” in which they “need to be performed”. This would contrasted to the teaching in Leeb in which the structures are all

formed at the same time (i.e. regarding claim 8) or that Leeb is silent regarding the order of steps (i.e. regarding claim 13).

In considering appellants' arguments regarding claims 8, 12, 13 & 17, the critical issue appears to be one of whether in a method claim, a certain order in the method steps must be followed in the formation of the final product. The examiner contends that absent a specific claim recitation of a particular order to be taken in the steps of formation, then the prior art only needs to meet the specific steps set forth by the method of formation to anticipate the claimed method claims (e.g. see MPEP 2110.02). With regard to the method claim of claim 8, it should be noted that the method recited therein uses generic method steps (e.g. depositing, etc) and as such are met by the laminating method disclosed by Leeb. In other words, when layers are laminated together, they must necessarily be "deposited" on top of each other. Similarly, the conductive shield layers must necessarily be deposited after the formation of the dielectric mounds. Moreover, since a specific order in forming the mounds is not specifically recited and hence not required, then a formation of the multiple mounds at the same time would still meet method claim 8, as recited. Likewise, regarding method claim 13, it should be noted that Leeb does disclose that in the depositing of the ground shield layers over the dielectric mounds, at least a portion of the lower mounds would necessarily have been covered as well as the formation of ground shield caps over the upper dielectric mounds, especially in view of the lack of any explicit order required for the formation steps.

Regarding the third issue subject to review on appeal [i.e. **whether claim 5 is obvious over Leeb or Matsubayashi et al in view of Dove et al under 35 USC 103(a)**], appellants'

have advance the argument that with respect to the combination with Dove et al, the Dove et al reference does not make up for the deficiencies in either Leeb or Matsabayashi et al.

In considering appellants' argument with regard to claim 5, it should be noted that such a combination with the Dove et al reference is merely being relied on to establish the obviousness of the KQ dielectric, to which appellants' have not argued the obviousness thereof. Accordingly, it appears that the patentability of this claim would generally rise or fall with the patentability of independent claim 1, from which this claim depends.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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